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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/707,185	11/25/2003	Dennis LUNDSTROM	07589.0149.NPUS01	1184
28694	7590	01/10/2005	EXAMINER	
TRACY W. DRUCE, ESQ. NOVAK DRUCE & QUIGG LLP 1615 L STREET NW SUITE 850 WASHINGTON, DC 20036			EDMONDSON, LYNNE RENEE	
			ART UNIT	PAPER NUMBER
			1725	
DATE MAILED: 01/10/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/707,185

Applicant(s)

LUNDSTROM ET AL.

Examiner

Lynne Edmondson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-10, 12, 13 and 15-19 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 11 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claim 17 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The intermetallic rivet is claimed in line 5, the intermetallic alloys are claimed in lines 3 and lines 15-18 of parent claim 15.

Claim Rejections - 35 USC § 112

2. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Regarding claim 12, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d). Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

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applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 3, 6, 7, 12, 15-17 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Stol et al. (USPN 6769595 B2).

Stol teaches a method of tying components of an alloy with a rivet made of a similar alloy (col 2 lines 5-61) said alloys comprising Ti or Al (col 2 lines 51-61) and intermetallic alloys (col 9 lines 7-30). It is noted that the method is the same regardless of the alloy used. The rivet is placed in a pre-drilled hole and subjected to heat and pressure. Pre-heating is optional (col 7 lines 38-54 and col 8 lines 1-48). A layer (clad) is arranged between components (col 8 lines 1-10). The article which is an aircraft component comprises the alloys riveted together. It is noted that a similar article can be made by a variety of means including but not limited to welding, brazing and friction plug joining.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-3, 6-10, 13 and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida (JPN 10-205510 A) in view of Baumgarten et al. (USPN 5111570).

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Yoshida teaches a method of tying components of an alloy with a rivet made of a similar alloy (col 2 lines 5-61) said alloys comprising Al (paragraphs 6 and 13). It is noted that the method is the same regardless of the alloy used. The rivet is placed in a pre-drilled hole (paragraphs 2 and 12) and subjected to heat and pressure (paragraph 5) via a combined pressure loading and heating tool (gun). The rivet is pressure loaded between electrodes of the tool. The fastener is heated by electrical current (abstract and paragraphs 10-14). Pre-heating is optional (col 7 lines 38-54 and col 8 lines 1-48). A layer (clad) is arranged between components (col 8 lines 1-10). The article comprises the alloys riveted together. It is noted that a similar article can be made by a variety of means including but not limited to welding, brazing and friction plug joining. However, the alloys are not further disclosed. Neither is an aircraft component disclosed.

Baumgarten teaches a rivet for tying metals wherein the rivet comprises TiAl and the component is used in aircraft (col 4 lines 4-51).

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ conventional Ti and Al alloys such as TiAl which are conventionally used in aircraft components to effect a full metallurgical bond between the parts with minimal deformation (Yoshida, paragraph 3).

8. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stol et al. (USPN 6769595 B2) in view of Rosman (USPN 3747466).

Stol teaches a method of tying components of an alloy with a rivet made of a similar alloy (col 2 lines 5-61) said alloys comprising Ti or Al (col 2 lines 51-61) and intermetallic alloys (col 9 lines 7-30). It is noted that the method is the same regardless of the alloy used. The rivet is placed in a pre-drilled hole and subjected to heat and pressure. Pre-heating is optional (col 7 lines 38-54 and col 8 lines 1-48). A layer (clad) is arranged between components (col 8 lines 1-10). The article which is an aircraft component comprises the alloys riveted together. It is noted that a similar article can be made by a variety of means including but not limited to welding, brazing and friction plug joining. However, the alloys are not further disclosed.

Rosman teaches a rivet for tying metals wherein the rivet comprises TiAl (col 6 lines 1-3).

It would have been obvious to one of ordinary skill in the art at the time of the invention to employ known Ti and Al rivet alloys such as TiAl to effect a full metallurgical bond between the parts with minimal deformation (Stol, col 2 line 62 – col 3 line 3).

Allowable Subject Matter

9. Claims 4, 5, 11 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Martin et al. (USPN 3477115) and Haupt (USPN 2181550).

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynne Edmondson whose telephone number is (571) 272-1172. The examiner can normally be reached on Monday through Thursday from 6:30 a.m. to 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lynne Edmondson
Primary Examiner
Art Unit 1725

LRE

LYNNE R. EDMONDSON
PRIMARY EXAMINER

1/6/05